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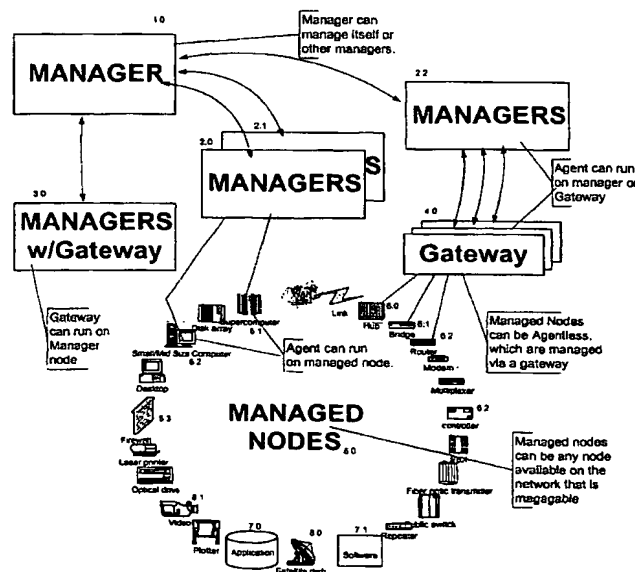
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- (71) Applicant (*for all designated States except US*): INNOVATIVE SYSTEM DESIGN INC. [US/US]; Edison, NJ (US).
- (71) Applicants and (72) Inventors: WAGNER, Lorelei [US/US]; Edison, NJ (US). NOCERA, David [US/US]; 809 Quarry Lane, Martinsville, NJ 08836 (US).
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- Published:**
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
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[Continued on next page]

(54) Title: VISUALIZING PATTERNS OF BEHAVIOR OF ABTRACTED NETWORK ELEMENTS



(57) Abstract: Provided herein are exemplary techniques for visualizing patterns of changes and behavior on a compute infrastructure composed of abstracted network elements and entities (Figure 10). A Differential View interface provides for complete visualization of infrastructure change and behavior for specific network elements/entities, groups of said elements/entities, or the system as a whole. That is, this interface further provides interactive filters and display patterns of change and behavior of said elements and entities, on a graduated scale, for the compute infrastructure, as a whole, for specific groups, and individual entities within the infrastructure.

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/34370

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G06F 15/16; G09G 5/00

US CL : 709/224; 345/736

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 709/202, 223, 224; 345/581, 733, 734, 736

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,751,965 A (MAYO et al.) 12 MAY 1998 Abstract, inter alia, Column 2, Line 57 through Column 3, Line 64	1-6, 10-12
Y	US 6,054,987 A (RICHARDSON) 25 AUGUST 2000 Abstract, inter alia, Column 1, Line 37 through Column 4, Line 10	1-6, 10-12
Y	US 6,175,363 B1 (WILLIAMS et al.) 16 JANUARY 2001 Abstract, inter alia, Column 2, Line 22 through Column 4, Line 45	1-6, 10-12
Y	US 6,279,034 B1 (JARRIEL et al.) 21 AUGUST 2001 Abstract, inter alia, Column 8, Line 15 through Column 14, Line 61	12

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

24 August 2004 (24.08.2004)

Date of mailing of the international search report

09 SEP 2004

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Box PCT
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

Marc D. Thompson

Telephone No. 703-305-3900

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/34370

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claim Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claim Nos.: 7
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
Claim 7 recites a "...trade secret algorithm, not fully disclosed..." in Line 11 of the claim. An unknown/undisclosed functional element cannot be searched.
3. ☒ Claim Nos.: 7-9
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐
☐

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

PCT/US03/000000

Continuation of Item 4 of the first sheet:

The title fails to conform to PCT Rule 4.3 due to length and lack of precision.

The Title is changed to the following: **VISUALIZING PATTERNS OF BEHAVIOR OF ABTRACTED NETWORK ELEMENTS**

Continuation of B. FIELDS SEARCHED Item 3:

EAST text search USPAT, EPO

Terms: network monitoring/management GUI, topology/usage/statistic changes/patterns, color gradient, timer